Saffire PRO 14

User Guide

FA0415-01

Focusrite®
www.focusrite.com

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

It is important that the apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases shall be placed on the apparatus.

- Do not expose this apparatus to drips or splashes.
- Do not place any objects filled with liquids, such as vases, on the apparatus.
- Do not install this apparatus in a confined space such as a bookcase or similar unit.
- Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating. Please ensure adequate space around the apparatus for sufficient ventilation. Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, tablecloths curtains etc.
- The apparatus draws nominal non-operating power from the AC outlet with its POWER switch in the off position.
- The apparatus should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time.
- An apparatus with Class 1 construction shall be connected to an AC outlet with a protective grounding connection.
- The MAINS plug or the appliance coupler is used as the disconnect device. Either device shall remain readily operable when the apparatus is installed for use.
- No naked flames, such as lighted candles, should be placed on the apparatus.

WARNING: excessive sound pressure levels from earphones and headphones can cause hearing loss.

GB This equipment must be earthed by the power cord
FIN Laite on liitettävä suojamaadoituskoskettimilla varustettuun pistorasiaan
NOR Apparatet må kun tilkoples jordet stikkontakt

Important Safety Precautions



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLICANCE TO RAIN OR MOISTURE

Environmental Declaration

Compliance Information Statement: Declaration of Compliance procedure

Product Identification:	Focusrite Saffire PRO 14
Responsible party:	American Music and Sound
Address:	5304 Derry Avenue #C
	Agoura Hills,
	CA 91301
Telephone:	800-994-4984

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For USA To the User:

1. Do not modify this unit! This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Focusrite may void your authority, granted by the FCC, to use this product.
2. Important: This product satisfies FCC regulations when high quality shielded cables are used to connect with other equipment. Failure to use high quality shielded cables or to follow the installation instructions within this manual may cause magnetic interference with appliances such as radios and televisions and void your FCC authorization to use this product in the USA.
3. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
    - Reorient or relocate the receiving antenna.
    - Increase the separation between the equipment and receiver.
    - Connect the equipment into an outlet on a circuit different from that
    - to which the receiver is connected.
    - Consult the dealer or an experienced radio/TV technician for help.

For Canada To the User:

This Class B digital apparatus complies with Canadian ICES-003

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

RoHS Notice

Focusrite Audio Engineering Limited has conformed and this product conforms, where applicable, to the European Union's Directive 2002/95/EC on Restrictions of Hazardous Substances (RoHS) as well as the following sections of California law which refer to RoHS, namely sections 25214.10, 25214.10.2, and 58012, Health and Safety Code; Section 42475.2, Public Resources Code.

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Introduction

Thank you for purchasing Saffire PRO 14, one in a family of Focusrite professional multi-channel FireWire interfaces featuring high quality Focusrite pre-amps. You now have a complete solution for routing high quality audio in and out of your computer.

This guide provides a detailed explanation of both the hardware and accompanying control software "Saffire MixControl" to help you achieve a thorough understanding of the product's operational features. We recommend that both users who are new to computer recording, as well as more experienced users, take the time to read through the user guide so that you are fully aware of all the possibilities that both the Saffire PRO 14 and accompanying software have to offer.

If the main User Guide sections do not provide the information you need, be sure to consult http://www.focusrite.com/answerbase, where you'll fine a comprehensive list of common technical support queries regarding the product to date.

Basics

The Saffire PRO 14 hardware interface provides the means for connecting microphones, line-level signals, instrument-level signals, and digital signals to your computer, which are then routed to your audio recording software / digital audio workstation (referred to throughout this user guide as "DAW").

All audio signals connected to the inputs, plus audio output from your computer programs are routed to the physical outputs for you to connect to an amp and speakers, powered monitors, headphones, analogue/digital mixer, and any other studio equipment that you wish to use. There are also connectors for sending and receiving MIDI.

The accompanying software application, Saffire MixControl provides further recording, routing and monitoring options, as well as the ability to control global hardware settings such as sample rate and synchronisation.

Saffire MixControl software provides mixing and routing to and from the DAW, allowing control over which signals are sent from the sequencer to each output. All inputs on the Saffire PRO 14 are routed directly to your DAW software for recording, but Saffire MixControl also allows you to route these signals to your monitors so that you can listen to the audio signals with zero latency - before they arrive at your DAW.

Box Contents

Along with your Saffire PRO 14 you should have:

1 - 6 pin FireWire cable (also known as an IEEE1394 cable)
1 - Universal DC power supply unit (PSU).
1 - Installer CD: Contains combined installer for drivers and Saffire MixControl software for Mac and Windows.
    Focusrite VST and AU Plug-in Suite for Mac and Windows - includes
        Compressor
        EQ
        Gate
        Reverb
4 - Self adhesive rubber feet - to be fitted to the base of the Saffire PRO 14
1 - Registration Card
1- Excite Bundle - includes:
        Ableton Live LE
        Bass Station AU and VST synthesiser plug-in with Serial number card
        Over a Gigabyte of 'Loopmasters" and "Mike the Drummer" royalty free samples
1 - Focusrite and Novation product brochure

Getting Started

The Saffire PRO 14 has a single 6 pin FireWire port on the back. This FireWire connection will work with any of the current FireWire standards and connectors; FireWire 400 (6 pin or 4 pin connection); and FireWire 800.

BEFORE YOU CONNECT THE Saffire PRO 14 TO YOUR COMPUTER, PLEASE RUN THE INSTALLER. This will ensure that the correct drivers are used, thus preventing any unexpected behaviour

The Saffire PRO 14 ships with a 6 pin FireWire cable. However on Windows laptops, the FireWire connection may be 4 pin FireWire. In this case you will need to purchase a 6 pin to 4 pin cable.

You may have a FireWire 800 connector on your computer. In this case you will need to purchase a 6 pin FireWire 400 to 800 cable.

The Saffire PRO 14 can be powered via the FireWire connection when using 6 pin FireWire 400 or FireWire 800. When connected to a 4 pin FireWire you will need to use the supplied PSU.

Note:
FireWire considerations - Most computers will generally be equipped with 1 FireWire bus. You may have multiple FireWire ports (connectors) on your computer, but these are all connected to one physical chip which controls the bus.

The FireWire bus is limited in the amount of data bandwidth it can handle. Each additional FireWire device connected to the FireWire bus demands additional bandwidth resources, thus increasing the chances of exceeding the total available bandwidth. Consequently, it is recommended that Saffire PRO 14 run on its own FireWire bus for best performance.

The Saffire PRO 14 should be able to work alongside other devices connected to the same FireWire bus. However, problems may arise depending on which FireWire devices are connected. For example, a FireWire disk used for back-up or a digital camera should not cause any problems, but when streaming audio from a FireWire hard disk or a FireWire box such as Focusrite Liquid Mix, the total FireWire bandwidth may be reached. This will result in audio drop outs, or reduced performance on either the Saffire PRO 14 or the other connected FireWire device.

For this reason, we would recommend that you use a separate FireWire bus for each FireWire device. This may be a PCI / PCIe card in your desktop, or a PCMCIA or Express card in your Laptop.

Note on FireWire Connection and Disconnection

All Saffire units adhere to the IEEE1394 (FireWire) standard, however it may be the case that the FireWire port on your computer motherboard or FireWire card does not.

Connection and Disconnection from a FireWire port that does not adhere to the IEEE1394 standard may result in permanent damage to both the Saffire and your computer.

To prevent permanent damage:

Connecting your unit(s)

Ensure that the computer is turned OFF
Connect the Saffire to your computer
Attach power supply if necessary
Turn ON your Saffire
Turn ON your computer
Turn ON your monitor speakers

Disconnecting your unit(s)

Shut down Saffire MixControl
Turn OFF your monitor speakers
Turn OFF your computer
Remove power supply if used
Disconnect your Saffire

Hardware



Back Panel

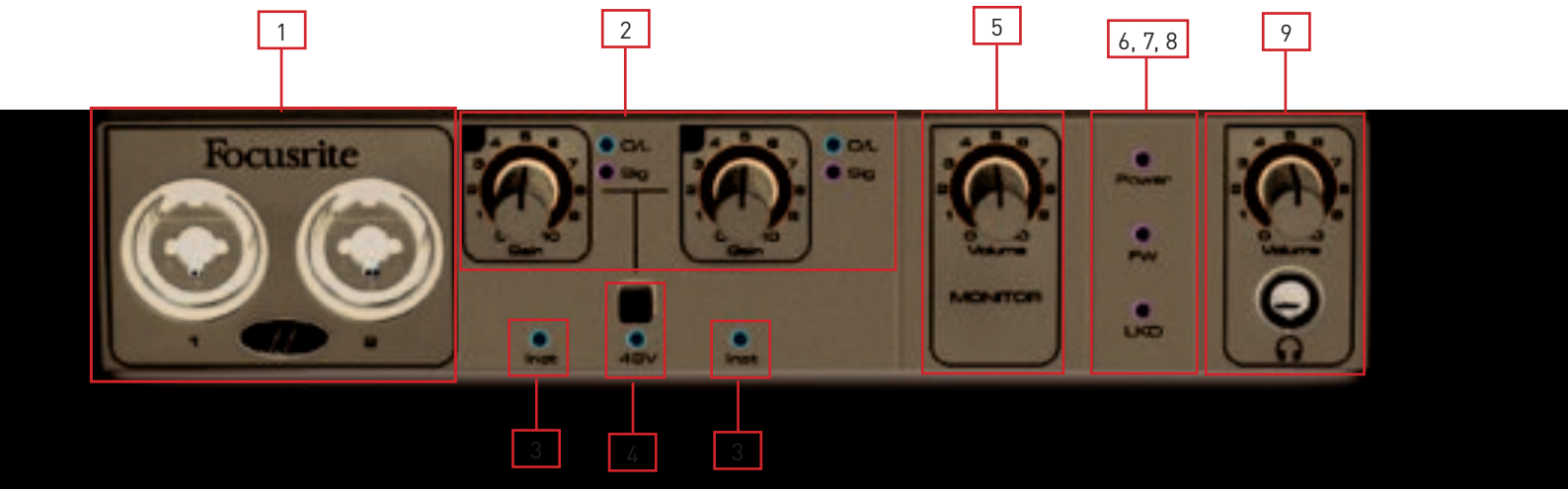
The Back Panel provides the majority of input and output connections on the Saffire PRO 14

1 2 x TRS jack sockets line inputs 3 and 4 *
2 4 x TRS jack sockets for line outputs 1-4 *
3 1 x IEEE1394 6 pin FireWire socket
4 2 x DIN5 MIDI input and output sockets
5 1 x 2.0mm DC power inlet socket - use supplied power supply only
6 2 x RCA S/PDIF input and output sockets

* Either 1/4 inch TRS (balanced) or TS (unbalanced) jack connectors can be used.

Front Panel

The Front Panel includes the input connectors for mic, line and instrument signals, as well as the input gain controls and monitoring controls.



1 Channels 1 and 2 with combo XLR input sockets for mic / line / instrument
2 Channels 1 and 2 gain controls with signal and overload LEDs
3 Channels 1 and 2 instrument LEDs
4 Phantom power switch with LED for mic inputs 1-2
5 Monitor level control
6 Power LED - lit when the unit receives power from FireWire or external power supply unit
7 FW (Active) LED - lit when the unit connects to the FireWire driver
8 LKD (Locked) LED - lit when the unit locks to its internal clock, or to an external clock source
9 Headphone level control and output ¼ ” jack

System Requirements

Macintosh

- OS: Mac OS X 10.5.8 or later
- Computer: Apple Macintosh with FireWire 400 port
- CPU/Clock: PowerPC G5/1 GHz or higher (Intel/Dual 1 GHz or better recommended)
- Memory (RAM): 512 MB (1 GB or more recommended)
- Screen Resolution: 1024x768 (1280x1024 or more recommended)

Windows

- OS: Windows 7 (All versions), Windows Vista (32bit version only) or Windows XP SP2 or higher (32bit version only)
- Computer: Windows compatible computer with FireWire 400 port.
- CPU/clock: Pentium or AMD with 1 GHz or higher (Dual 1 GHz or better recommended)
- Memory (RAM): 512 MB (1 GB or more recommended)
- Screen resolution: 1024x768 (1280x1024 or more recommended)

Installation (Windows and Mac)

We aim to ensure that the latest installation software will be on the disk included with your Saffire PRO 14. However we strongly recommend that you check for the latest version of software on our website; www.focusrite.com before starting to work with your Saffire PRO 14 unit.

PLEASE ENSURE THAT YOU RUN THE INSTALLER BEFORE CONNECTING THE SAFFIRE PRO 14 TO YOUR COMPUTER

1. Insert your installer disk into your computer's CD-ROM drive.
2. You should see a window pop up showing the following installer icons:
   For Windows - Saffire MixControl-2.1.exe **For Mac -** Install Saffire MixControl.pkg
3. Double click on the installer icon to begin the installation process.
4. Follow on screen instructions to complete the installation process.
5. Restart your computer.
6. Connect the Saffire PRO 14 to your computer.

Once the installation is complete, your computer OS should automatically select the Saffire PRO 14 as the default audio outputs. To make sure this is the case:

On **Windows 7**, go to Start → Control Panel → Hardware and Sound → Sound → Manage Audio Devices → Set Default 'Playback' and 'Recording' to 'Saffire Audio'.

On **Windows Vista**, go to Start → Control Panel → Hardware and Sound → Sound → Manage Audio Devices → Set Default 'Playback' and 'Recording' to 'Saffire Audio'.

On **Windows XP**, go to Start → Control Panel → Sounds, Speech and Audio Devices → Sounds and Audio Devices → Audio tab → Set Sound playback and recording to 'Saffire PRO Audio'.

On **Mac OSX**, go to System Preferences → Sound → Set the input and output to 'Saffire'.

For more detailed setup options on a Mac, go to Applications → Utilities → Audio Midi Set-up.

Audio Set-up in your DAW

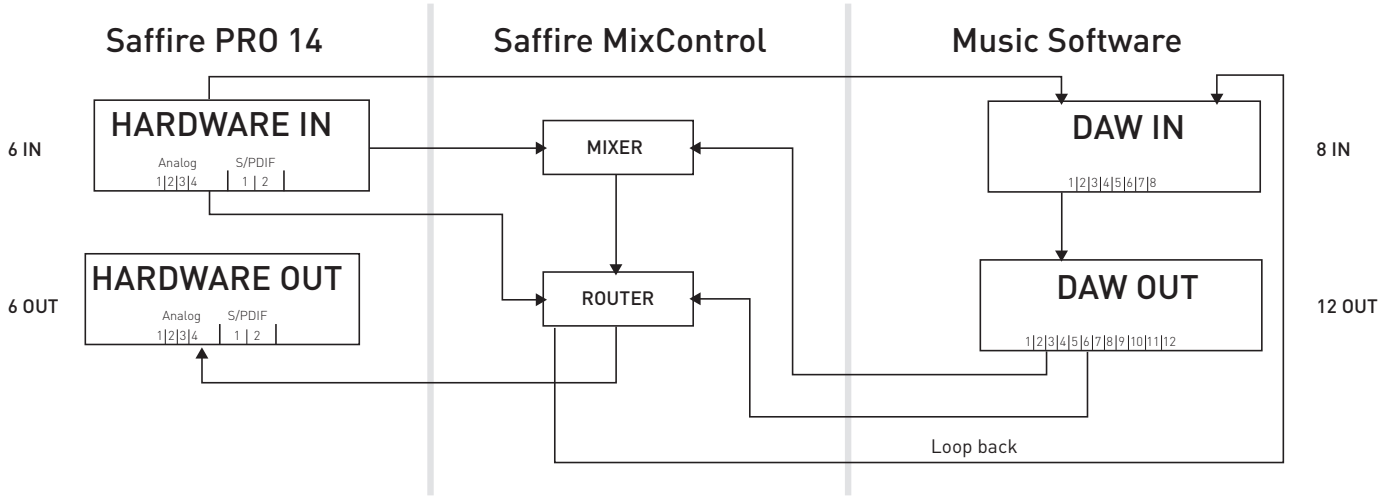
The Saffire PRO 14 is compatible with any DAW that uses ASIO drivers on Windows, and any DAW that uses Core Audio on Mac. Your DAW software may not automatically switch the device it uses to input and output audio.
You must ensure that you select 'Saffire' as the ASIO driver (Windows) or Core Audio driver (Mac) in your DAW's audio set-up page.
Please refer to your DAW's documentation if you are unsure where to select the ASIO / Core Audio driver.

Saffire PRO 14 Architecture

Saffire PRO 14 offers more than just simple input and output routing to and from your computer. Saffire MixControl software also allows you to re-route audio signals to any output, and to create custom mixes to be sent to your recording artists, outboard processing equipment, or mixing console.

The following diagrams give an overview of the Saffire PRO 14 audio paths at all sample rates. The hardware inputs are routed directly to the DAW inputs.

The table below the diagram shows the input routing configuration.



HARDWARE IN	DAW IN
Analogue 1-4	1-4
S/PDIF 1-2 (RCA)	5-6
Loop back 1-2	7-8

The hardware features 6 inputs and 6 outputs, whereas the music software will display 8 inputs and 12 outputs.
The additional 2 inputs are in the form of Loop back 1-2; allowing the routing of any internal signal back into the DAW (see page 17).
The 12 DAW outputs can be sent to the mixer in Saffire MixControl, where they can be mixed and sent to the 6 hardware outputs (see page 13).

Saffire MixControl

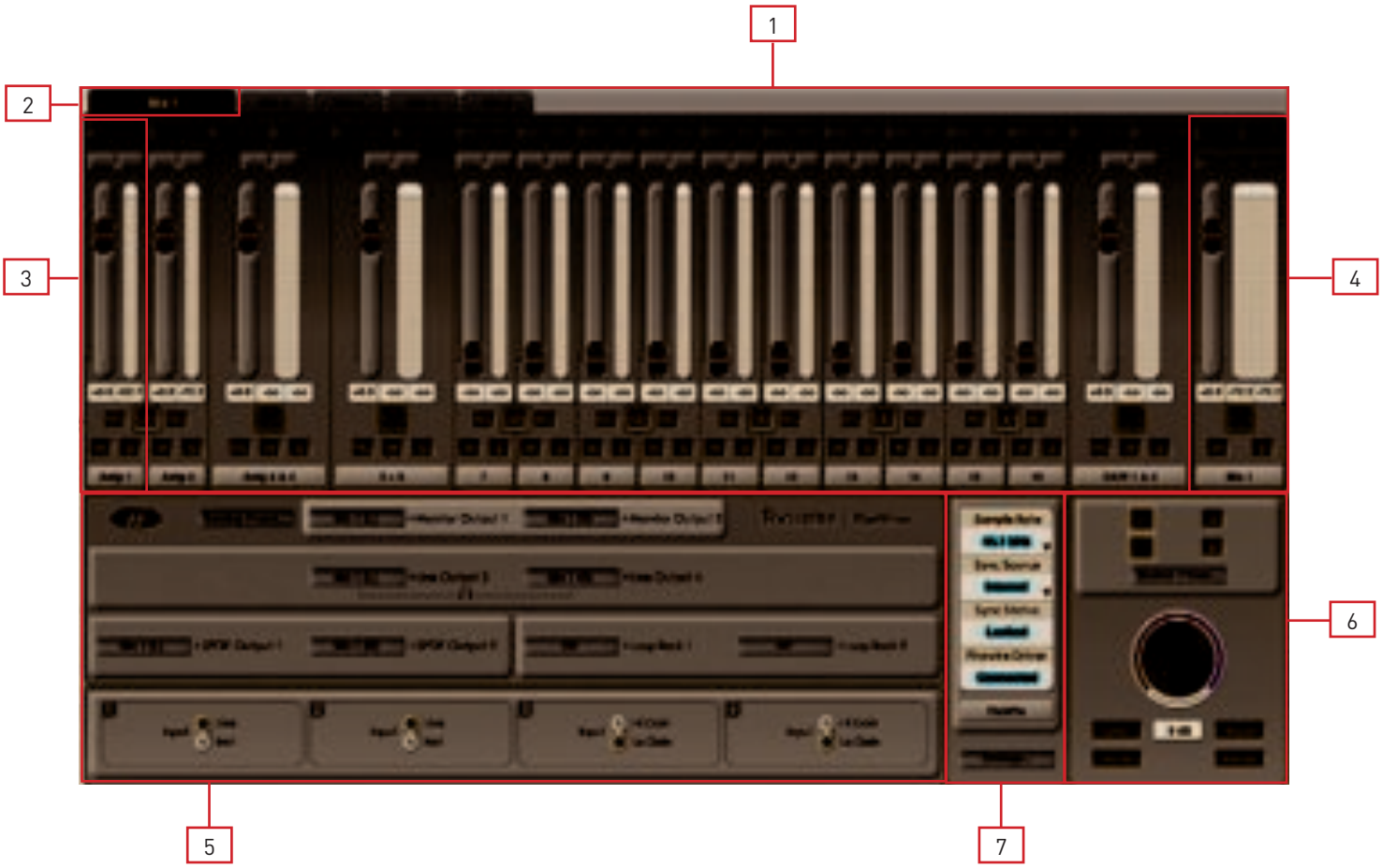
The Saffire MixControl software allows flexible mixing and routing of all audio signals to the physical audio outputs as well as control of output monitor levels. All sample rate selection, digital syncing and buffer size settings (Windows only) are available from Saffire MixControl.

To open Saffire MixControl.

Windows
Start → Programs → Focusrite → Saffire MixControl.

Mac
Open Finder → Applications → Saffire MixControl.

This is how the Saffire MixControl Graphical Interface will appear on your computer.



1. Mixer
2. Selected Mix tab
3. Mixer Input channel
4. Selected Mix Output channel
5. Routing and pre-amp section
6. Monitor section
7. Device Status section

Pre-amp section

When connecting a microphone to the Saffire PRO 14, you must connect an XLR cable to the combo inputs on the front panel. When connecting either line level signal or instrument signal to the combo inputs, you must select either 'Line' or 'Inst' from the preamp section.



Additional Line level signals can be connected to inputs 3 and 4 on the rear of the unit. The pre-amp gain for inputs 3 and 4 can be set to either Lo (low) or Hi (high) gain. The maximum input level before the signal will clip for each setting is as follows:

Low gain: 0dBFS = +16dBu
High gain: 0dBFS = -10dBV (~-6dBu)

Mixer section

The Saffire MixControl software includes a total of 6 mixes, each with a maximum of 18 channels in the mix. Up to 6 mono mixes or 3 stereo mixes, (or any combination of mono and stereo mixes) are available, making up a total of 6 mix channels.

The Mixer Section is used to create mixes for monitoring purposes. The mixes you create do not affect how the audio inputs are routed to the DAW, nor does it affect the audio level of the recorded signal. What you set up in the mixer section of Saffire MixControl only affects what is heard in the outputs of the mix.

The recording levels that are sent to the DAW are therefore only affected by the input gain settings on the Saffire PRO 14, not the mixer.

The mixer section is useful for creating different simultaneous mixes. For example, you may wish to provide a headphone monitor mix for the recording artist that is different to the mix heard in the monitor speakers.

For example, the artist needs to hear mainly the backing track, and a little of the recorded input signal. The engineer needs to hear mainly the recording artist's signal and a little of the backing track.

A separate mix can be created for both artist and engineer with the exact levels desired. Each independent mix is created on a different mix tab.

Mixer tab

Each mix can be selected by clicking on the corresponding mixer tab.



Input channel

Here is a picture of 2 mixer input channels. Below is a description of every component of a mixer channel.



Audio source select

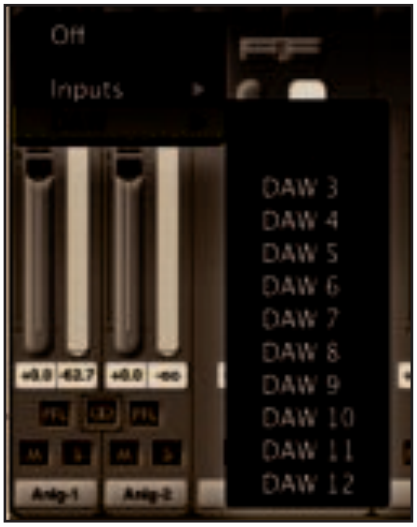


When there is no input to a mixer channel, it will display "Off".

Clicking on the "Off" region brings up a list of all available inputs that can be fed to the channel. All analogue (labelled 'Anlg'), digital inputs (S/PDIF), and DAW outputs are available.

When selecting a source on a stereo channel, if an odd numbered input is chosen for the left channel, the next even number input is auto selected for right, and vice versa.

Note that if an input has already been taken, it will be greyed out and cannot be selected again. The input needs to be deselected from the track where it is already taken, and then re-selected on the desired track.



To get sounds from your DAW or other computer applications into the mixer, you should select 'DAW 1' and 'DAW 2' on a stereo input track.

Pan slider

A Pan Slider is used to position the audio signal anywhere between the left and right speakers.

Moving the horizontal slider from left to right will move the audio signal from left to right within the stereo field, i.e., the signal is faded between two audio outputs such as monitor L and R.



When used with a stereo track, the slider affects the audio signal such that when fully left, only the left channel is heard, and when fully right, only the right channel is heard

Fader



Use the fader to set the level of your audio signal for monitoring within the current mixer.
Click the fader with your mouse and drag to any position. Double click on the fader to set it to 0.

Fader range is from -∞ to +6 dB with the current fader level displayed in the box below.
Holding the Shift key whilst moving the fader allows for fine adjustment of fader levels.

Meter



The meter shows the signal level of the source input to the channel. The recent maximum signal level is displayed in the box below.

The metering is always pre-fade, showing the level of the signal at the input. Therefore, the fader level has no effect on the metering.

Clip light
If the red portion at the top of the fader lights up, then the signal level is too high.
You will need to turn down the signal level by either using the gain knobs on the front panel for the analogue inputs, using the gain on the external devices connected to the digital inputs, or using the gain within the DAW.

Once the gains are lowered, click on the red portion to reset the clip light.

Mute



Pressing this button mutes the signal. Red indicates that Mute is active.

Solo



Pressing this button solos the signal. The level of the fader will affect the level of the soloed signal.
Yellow Indicates that Solo is active.

PFL (Pre-fade listen)



Pressing this button solos the signal and automatically routes it to Monitor 1 and 2. The level of the soloed signal is pre-fade (i.e. it will not be affected by the level of the fader). Green indicates that PFL is active.

Stereo



Pressing this button combines 2 mono channels into 1 stereo channel.

Track name

As a default, each track is given a number as a name. Double click to rename the track to something more useful such as 'Vocal Mic'.



Mix Output channel



The output channel of the mix is where all the input channels are routed to and mixed together. The output channel gives you control of the overall level of the entire mix. You can send a mix to any or all hardware outputs; if a single output is selected this is displayed at the top of the output channel. "Many..." will be displayed if multiple outputs are selected.

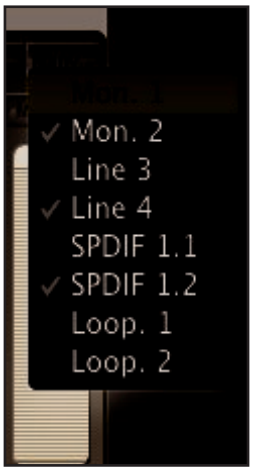
The output channel can be either mono or stereo depending on the status of the stereo button. When the channel is set to stereo, you will see that the tab for that mix doubles in size. This is because the stereo version takes up 2 channels of the available total output channel count.

Note that when the solo button on an output channel is pressed, that channel (i.e. the whole mix) is soloed and routed to Monitor outputs 1 and 2. This is a non-latching button.

You can name the current mix by typing the desired name in the text field below the output channel. You will see the name appear in the mix tab. For example, Mix 1 can be renamed "Monitor Mix", and Mix 5 named "Headphone 1 Mix".

To copy an existing mix to another mix, simply click on "Copy Mix To..." and select the mix to which you would like to copy. Note that you can only copy a stereo mix to another stereo mix, and a mono mix to another mono mix. Therefore you must make sure that you have correctly set up the output channels to either stereo or mono before copying the mix.

Click on "Sel..." to view a drop down menu of the available output destinations for the selected mix (see the drop down menu in the screenshot on the left side of this page). Select an output in this menu in order to choose the output destination for the selected mix.



Routing section

The routing section allows you to set up which audio sources are to be routed directly to which physical outputs.



The routing section displays every physical output on the Saffire PRO 14. An audio stream can be routed to an output using the dropdown menu to the left of the output.



Clicking on the box to the left of the output label will bring up a list of all available audio output sources.

The available sources include:

- All inputs (Analogue 1-4, S/PDIF)
- All DAW playback streams (DAW 1 - 12)
- All mixes from the mixer (Mix 1 - 6)

If you have named the mix (by clicking in the track name section – see previous chapter) then this name is displayed as the mix source name.

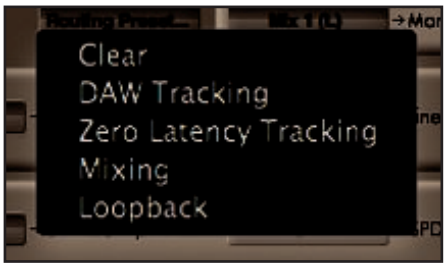
Note that the routing section is linked to the selection made for the output channel destination set-up in the mixer. If you have outputs pre-assigned from when you created your Mix, you will see the routing selections have been set up. Similarly, if you change the audio source from the routing section, the output of the mix will change automatically.

Routing audio to the headphones

The headphone symbol in the router denotes the source for the left and right ears of the headphones. The headphone left ear is a copy of line output 3 and the right ear a copy of line output 4. All audio routed to line outputs 3 and 4 will be heard in headphone left and right respectively.



Routing presets



Routing presets are provided as a starting point for you to create your own routing and mixer set-ups.
These will enable you to quickly set up your routing for recording (monitoring your inputs); mixing (sending signals out to outboard processors or external mixer); or internal looping (routing audio between software applications without leaving the computer).

Clear

This turns off all output routing. This can be used to re-set the routing for when you need to completely restart a configuration, meaning you do not have to manually reset the routing.

DAW Tracking

'DAW Tracking' is used for the initial recording process. It will automatically output DAW 1 and 2 to be sent to all line outputs - your main monitors (1+2) and headphones. All input channels must therefore be monitored from within the DAW application.

Zero Latency Tracking

Zero Latency Tracking is used for the recording process. It will automatically output Mix 1 and 2 to all your line outputs, routing to the main monitors and to the headphones simultaneously. Line inputs and DAW outputs must be set up in Mix 1 so that you are able to monitor these sources with zero latency. You must also ensure that you are not monitoring the same signals from within your DAW at the same time, otherwise you will be monitoring the same signal twice (once direct from Saffire MixControl AND a second time (with latency) from your DAW.)

Mixing

'Mixing' is used for the mixing process. DAW outputs route directly to the line output of the same number allowing external mixing of the 4 signals in e.g. an analogue mixer. DAW outputs 1-4 are routed to Line outputs 1-4.

Loopback

Use when recording from one software program to another. You can use loopback routing to record audio from e.g. your internet browser into your DAW, or to record from one DAW to another.

To prevent any audio feedback, make sure that the DAW you are recording into is not set to monitor its inputs. Alternatively, set the outputs of the DAW into which you are recording to 3 and 4; this allows you to monitor the inputs without feeding the signal back into the record stream.

Monitor section



The output levels of the monitor outputs and line outputs are configured in the Monitor Section. You can set up your Saffire PRO 14 so that the audio sent to the line outputs are controlled by the software volume dial; independent of the software volume dial; or muted.



Monitor control enable buttons (1 to 4)

The monitor control enable buttons indicate which outputs are controlled by the monitor section on the GUI directly below the 4 buttons. The Saffire PRO 14 can be set up so that you have control of volume levels, and depending on your monitoring set-up, you may control the level sent to just a single pair of speakers, or up to 4 speakers simultaneously.

(All digital output levels are unaffected by the monitor section in Saffire MixControl. Use the output levels of the DAW to control digital output levels).

Each button can be set to 1 of 3 possible states:



Blue - this output is controlled by the below monitor section.



Red - this output is not controlled by the below monitor section and it is muted.



Grey - this output is not controlled by the below monitor section and it is at full level.
To set a button to its grey state, SHIFT + Click the button.

WARNING: When a monitor control button is set to 'Grey', the signal routed to that output will be played back at full level. This may potentially result in a very loud signal being sent to your monitor speakers, headphones or other equipment.

Be cautious when setting your levels (in your DAW or the Saffire MixControl Mixer) before setting the monitor button to Grey.

Monitor Presets drop-down menu

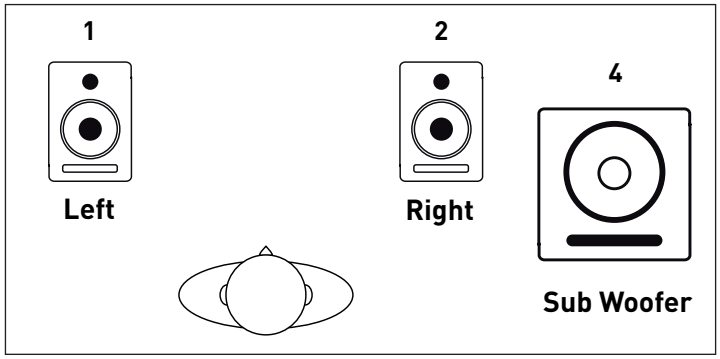
These presets allow quick changing of typical monitoring set-ups.



For the monitor presets to work, you must have your speakers connected to the line outputs as shown in the picture below.

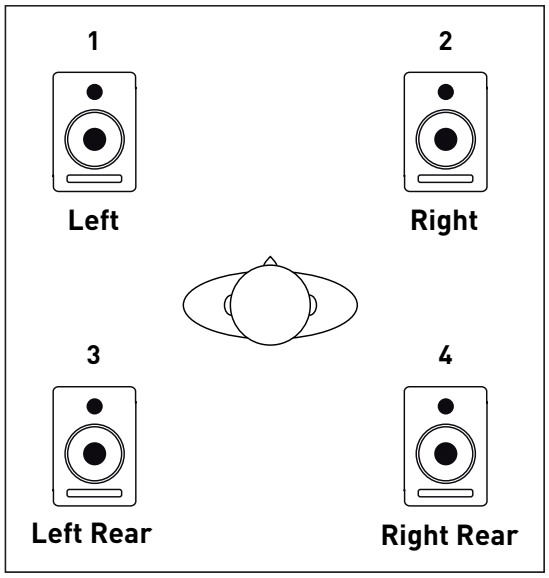
Surround sound monitoring: 2.1

Line out	Speaker
1	Left
2	Right
4	Sub Woofer



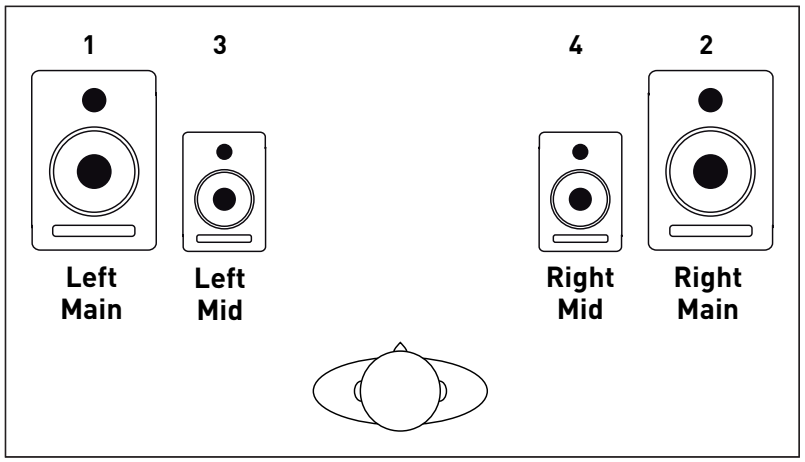
Surround sound monitoring: Quad

Line out	Speaker
1	Left
2	Right
3	Left Rear
4	Right Rear



Loudspeaker set-up: Main, Mid.

Line out	Speaker
1	Left Main
2	Right Main
3	Left Mid
4	Right Mid



Monitor Presets

Preset Name	Output
Off - no monitor control buttons enabled, therefore no sound will come out of any analogue output	
Mono - outputs only to the centre / mono speaker (Line output 3.) All other channels are muted	Output - 3
Stereo - outputs to stereo speakers (monitor 1 and 2 output.) All other channels are muted	Outputs - 1, 2
Quad - outputs to monitor 1 and 2 outputs and line 3 and 4 outputs. All other channels are muted	Outputs - 1, 2, 3, 4
2.1 Surround - outputs to stereo speakers (monitor 1 and 2 output) and sub (Line output 4)	Outputs - 1, 2, 4
Mid + Phones 1 - outputs to mid speakers and headphones 1	Outputs - 3, 4

Monitor Section controls

The following controls in the Monitor Section will affect those channels that have been selected for monitor control (indicated with a blue button, see above).

Monitor level control knob

Set the output level of all assigned outputs using this knob. The output level can be adjusted using the mouse and will affect all



assigned outputs (as indicated with a blue button). The dB display below shows the current level to which the monitor knob is set.

Note that the front panel Monitor control affects only outputs 1 and 2, and is an additional volume control on top of the monitor level set in Saffire MixControl software.

Dim switch



Attenuates the output level by 18dB.

Mute switch



Mutes the output.

Left Mute switch



Mutes the left output.

Right Mute switch



Mutes the right output.

Remember that these dim and mute buttons only affect the outputs selected for control (i.e. Blue) in the monitor control section.

Device Status section



The Device Status section shows information about the sample rate, synchronisation and driver status of the Saffire PRO 14. The desired sample rate can be set as well as external synchronisation options for using the Saffire PRO 14 with external digital devices.

Sample rate display



This displays the current sample rate at which the Saffire PRO 14 is running. To change the sample rate, click on the red sample rate value and select 44.1kHz, 48kHz, 88.2kHz, or 96kHz,

Note: you must quit your DAW application BEFORE you make sample rate changes to prevent any undesirable side-effects in your DAW!

Sync Source display



Displays the currently selected sync source. To change the sync source, click on the red sync source value and select S/PIDF or Internal.

Sync Status display

Displays "Locked" when the Saffire PRO 14 has successfully locked to the specified Sync Source.
If "No Lock" is seen, then the unit has been unable to lock to either an external S/PDIF signal. If this is the case, then please check that digital cables are secure in their input sockets, and that the external digital devices have been set up as sync master devices.

FireWire Driver



Displays "Connected" when the Saffire PRO 14 is connected to the computer via FireWire.

In Use (Windows only)



Displays "In Use" when any application using the saffire audio driver is in use (your DAW or media player for example). If you want to make changes to sample rate, sync source or FireWire driver latency, you must shut down these applications and wait for the FireWire driver to display "Connected" before accessing these settings.

Unit Name Display



This displays the name of the Saffire PRO 14 unit, and allows the re-naming of the Saffire PRO 14 unit. Right-click in the field and enter your text. Press ENTER (RETURN) on your computer keyboard to complete.

Settings Menu

This is a drop down menu containing all of the following items which allow you to set up different global/system configurations.

This is the only part of Saffire MixControl software where there are differences between the Windows and Mac versions.

Mac **Windows**



S/PDIF AC3

Allows the user to stream AC3 directly via the S/PDIF outputs. (AC3 is encoded 5.1 audio, e.g. from DVD player software, that will be sent via S/PDIF cable to your 5.1 decoder.)

FireWire Driver Latency

The Saffire PRO 14 latency performance will be dictated by the Core Audio buffer size specified in your DAW (Mac,) or as set in the ASIO buffer size (Windows.) The FireWire Driver Latency affects the performance of the Core Audio or ASIO buffer settings.
If you are experiencing clicks and pops or audio dropouts, this may be due to certain computer hardware affecting the performance of audio devices connected via FireWire. Rather than removing and replacing hardware (e.g. your graphics card or wireless internet card) trying a longer FireWire Driver Latency setting may solve the problem.



ASIO Buffer Size (Windows only)

Set the buffer size of your ASIO driver here.



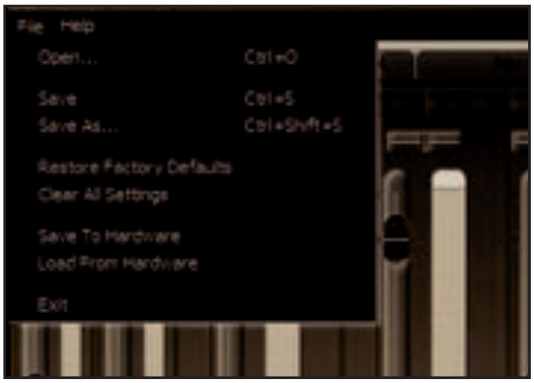
A small buffer size will in result in lower latency at the expense of increased CPU usage. A high buffer size will result in a higher latency but with lower CPU usage. If you are using lots of virtual instruments and effects processing in your DAW project, and the CPU usage is high, then increase the buffer size to permit lower CPU usage.

File Menu

Mac



Windows



Open - opens a 'File Open' window allowing selection of any pre-saved Saffire MixControl set-ups.

Save - opens a 'File Save' window allowing selection of a location into which your Saffire MixControl set-up can be saved. Subsequent saves overwrite the original file.

Save As - opens a 'File Save' window allowing selection of a location into which your Saffire MixControl set-up can be saved. Use this option if you want to keep your original saved set-up and create a new one with a different name.

Restore Factory Default - causes the Saffire PRO 14 to revert to the original default state in which it left the factory.

Clear All Settings - causes the Saffire PRO 14 to reset all mixer and routing settings. This can be used to globally reset all mixer, routing, and monitor settings, allowing creation of a new set-up from scratch.

Save to Hardware - this saves the current Saffire MixControl set-up to the Saffire PRO 14 hardware. If you are moving the Saffire PRO 14 from one computer to another and want to retain the set-up, then choose this option. Note that Saffire MixControl does not automatically load from hardware (as this would overwrite a current set-up); it must be loaded manually.

Load from Hardware - this loads the saved set-up from the Saffire PRO 14 hardware into the Saffire MixControl software.

As you can see from the above screen shots, 'Open', 'Save' and 'Save As' all have keyboard shortcuts. These are standard shortcuts for their respective functions, so if you are regularly changing settings for your various sessions, then the shortcuts will reduce your set-up time.

Dual Unit Support

It is now possible to run two Saffire interfaces connected to a single computer. This enables two devices to be connected to the same system and used as one device expanding the available Inputs and Outputs to your DAW. Dual Device Support is limited to two devices connected to the same bus at sample rates of 48kHz or below.

The following table shows which 2 Saffire units can and cannot be used together:

	Liquid Saffire 56	Saffire PRO 40	Saffire PRO 24 DSP	Saffire PRO 24	Saffire PRO 14
Liquid Saffire 56	NO	NO	YES	YES	YES
Saffire PRO 40	NO	YES	YES	YES	YES
Saffire PRO 24 DSP	YES	YES	YES	YES	YES
Saffire PRO 24	YES	YES	YES	YES	YES
Saffire PRO 14	YES	YES	YES	YES	YES

Dual unit combinations in Green can be used together, those in Red cannot be used together.
Therefore any two Saffire PROs can be used together, apart from the Liquid Saffire 56 which can only be used with Saffire PRO 24 DSP, Saffire PRO 24, or Saffire PRO 14

Getting Started - Computer Connection

Computer with a single FireWire port

Connect one Saffire to the FireWire port on the computer.
Connect the second Saffire to the spare FireWire port on the first Saffire.
Note that the Saffire PRO 24, Saffire PRO 24 DSP and Saffire PRO 14 have a single FireWire port, so will need to be connected to a Saffire PRO 40 or Liquid Saffire 56 and will require the external PSU when connected in this way.

Computer with multiple FireWire ports

Connect both Saffires directly to computer.
Note that both FireWire ports on the computer **MUST** be on the same FireWire bus. i.e. the same PCI / PCIe FireWire card.

Controlling Dual Units



Saffire MixControl allows control of two units from the same interface. One unit is displayed at a time. To switch focus between units, click on the name field.

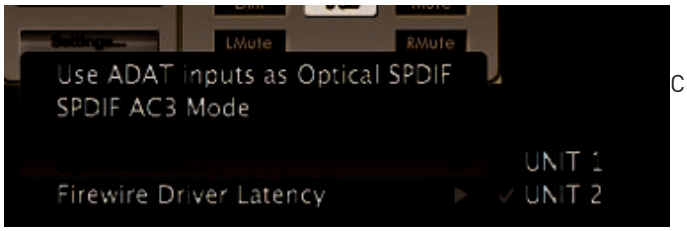
Naming Units



Connected units can be renamed so they may be more easily distinguished in a dual device environment. Right-click on the name field to rename the unit. Note that the name may take a short time to update.

Master Sync Device

When dual Saffire devices are connected to one computer via FireWire, the two devices will automatically sync together with no need for any additional cable connections. However one device will be set as the Master Sync Device.



Click on the settings menu to select which unit is the Sync Master.



Master



Slave

Sample rate and digital sync settings can only be set when Saffire MixControl has control of the Master Sync Device. When controlling the slave device, sample rate and sync status are greyed out.
When connecting any external digital devices, the external sync source (Word Clock, ADAT or S/PDIF) must always be connected to the Master Sync Device. If additional digital units are connected, then they must also be slaved to the device providing sync to the Master Sync Device. If the Master device is providing an external sync source to a digital unit, then the digital unit can be connected to either master or slave device.

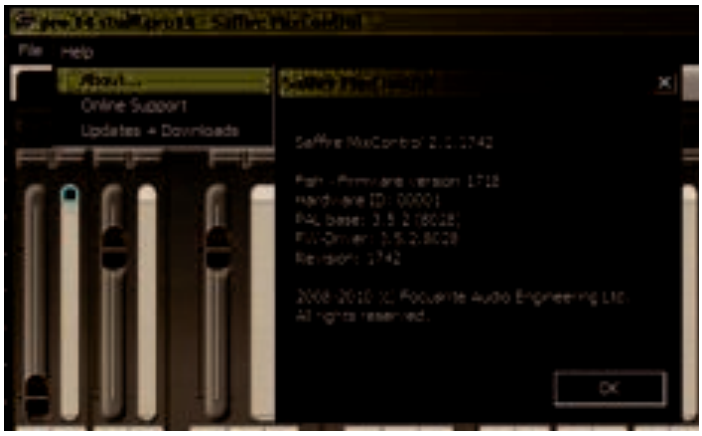
DAW input and output stream order

The input and output streams of both units will be combined into a single list when viewed from the DAW, or as seen by the operating system audio preferences when outputting sound from iTunes/Windows Media Player.

Each connected Saffire will have a (fixed) hardware ID. Inputs and outputs from the Saffire with the lowest hardware ID will always appear first in the list.



Mac Users: Click on "About Saffire MixControl" from the 'Saffire MixControl" menu to find the hardware ID of the unit currently in focus.



Windows Users: Click on "About Saffire MixControl" from the "Help" menu to find the hardware ID of the unit currently in focus.

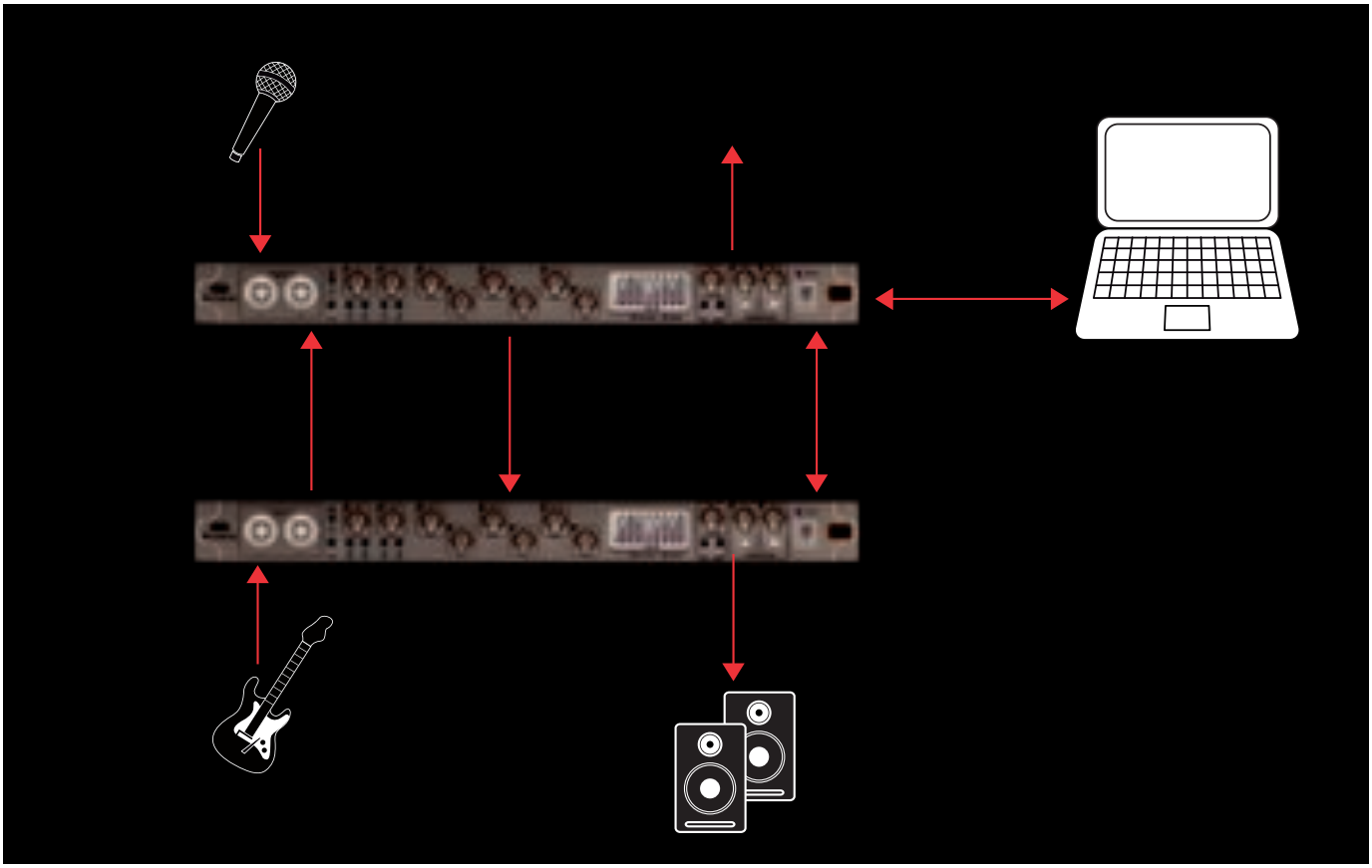
The look-up tables at the end of this guide show how the DAW inputs and outputs are routed to the inputs and outputs of Saffire MixControl.

DAW routing

Audio can be routed from Saffire to Saffire using your DAWs own routing capabilities. This allows audio processing from the DAW, but will result in audio latency due to the DAWs audio buffer.
Look-up tables for every possible Saffire combination can be found at the end of the document.

Zero latency routing

When using a single Saffire unit, latency-free monitoring is achieved using internal routing.
Latency-free monitoring is possible when using two Saffires, however, it is not possible to create a single latency-free monitoring mix for both units using the FireWire connection alone.
The way to achieve this is to make audio connections to/from both units, and configure the MixControl software for each unit. This article outlines how to achieve this using the S/PDIF inputs and outputs, using the example of 2 Saffire PRO 40s connected to a single computer. However the set-up process is the same for any Saffire combination.
Firstly, you will need to configure your hardware as outlined in the diagram below:

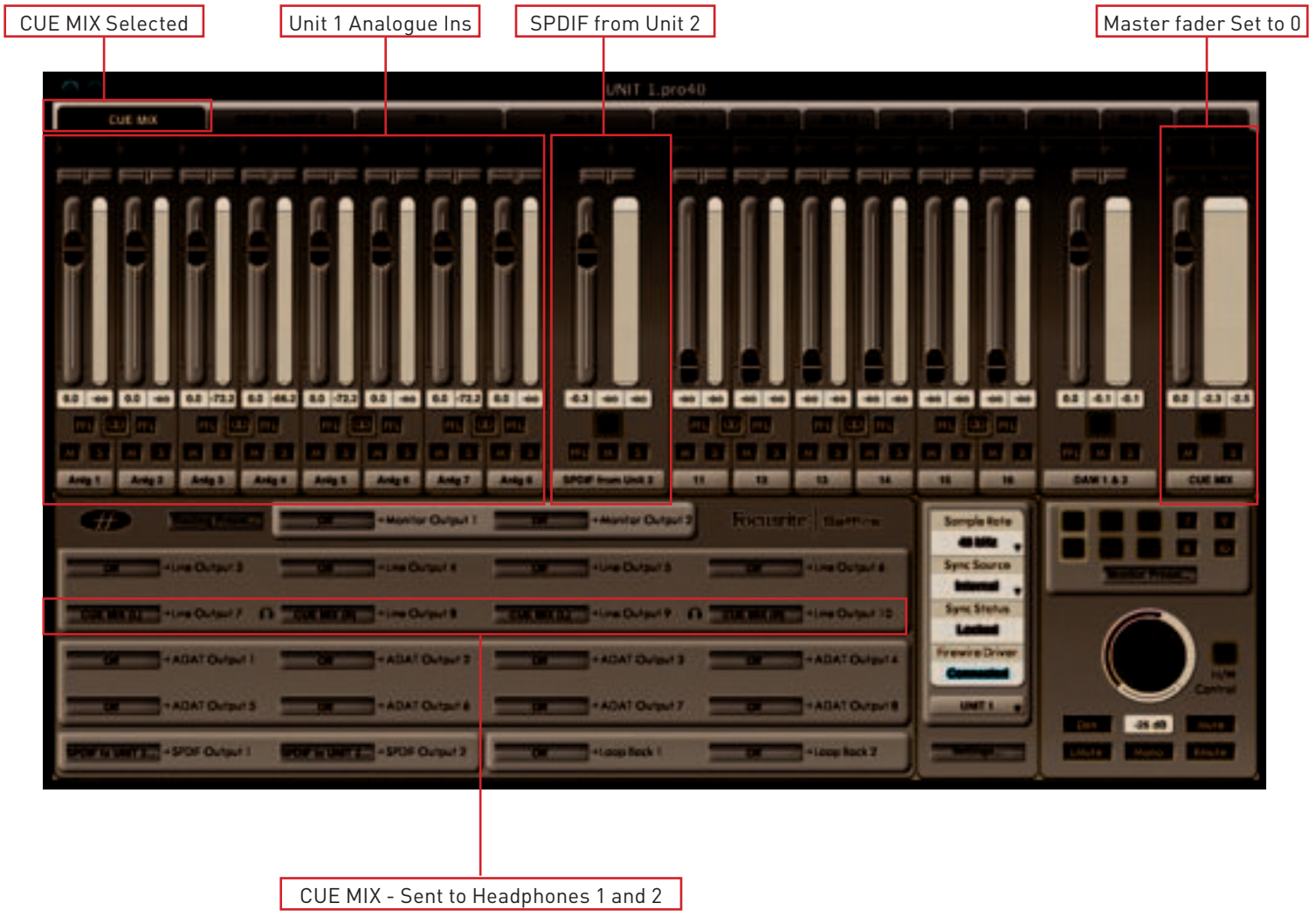


When you have connected your hardware as shown, you will then need to configure your software.
If you want to monitor all of your inputs from the outputs of both units (as pictured above), both units will need 2 output mixes configured.

- a MONITOR output mix (going to speakers/headphones/etc)
- a S/PDIF output mix (going to the other unit)

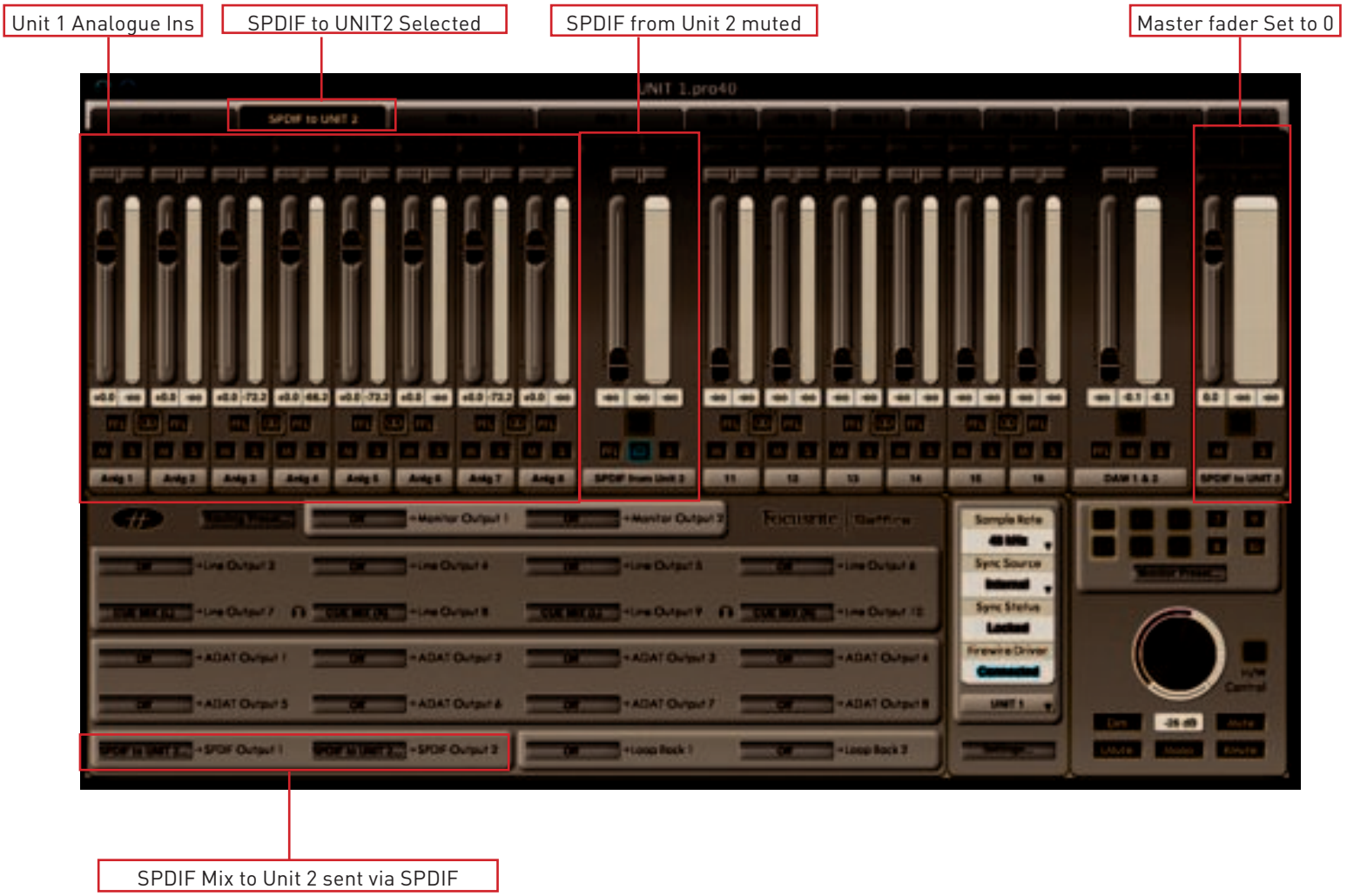
Unit 1 Setup Cue Mix (unit 1)

Open Saffire MixControl.
Click on the first mixer tab.
Ensure that the mixer output is stereo by clicking on the stereo button (below the meters of the output channel).
Add the analogue inputs to the mixer, and set the required levels and panning.
Add the S/PDIF input to the mixer (this is the feed from unit 2).
Rename the mix to "Cue Mix" (or similar) by clicking on the name field (below the meters of the output channel).
This mix will be a combination of the audio that you are recording (unit 1 inputs), and the S/PDIF output mix from Unit 2 (connected to the S/PDIF input of unit 1), as shown below:



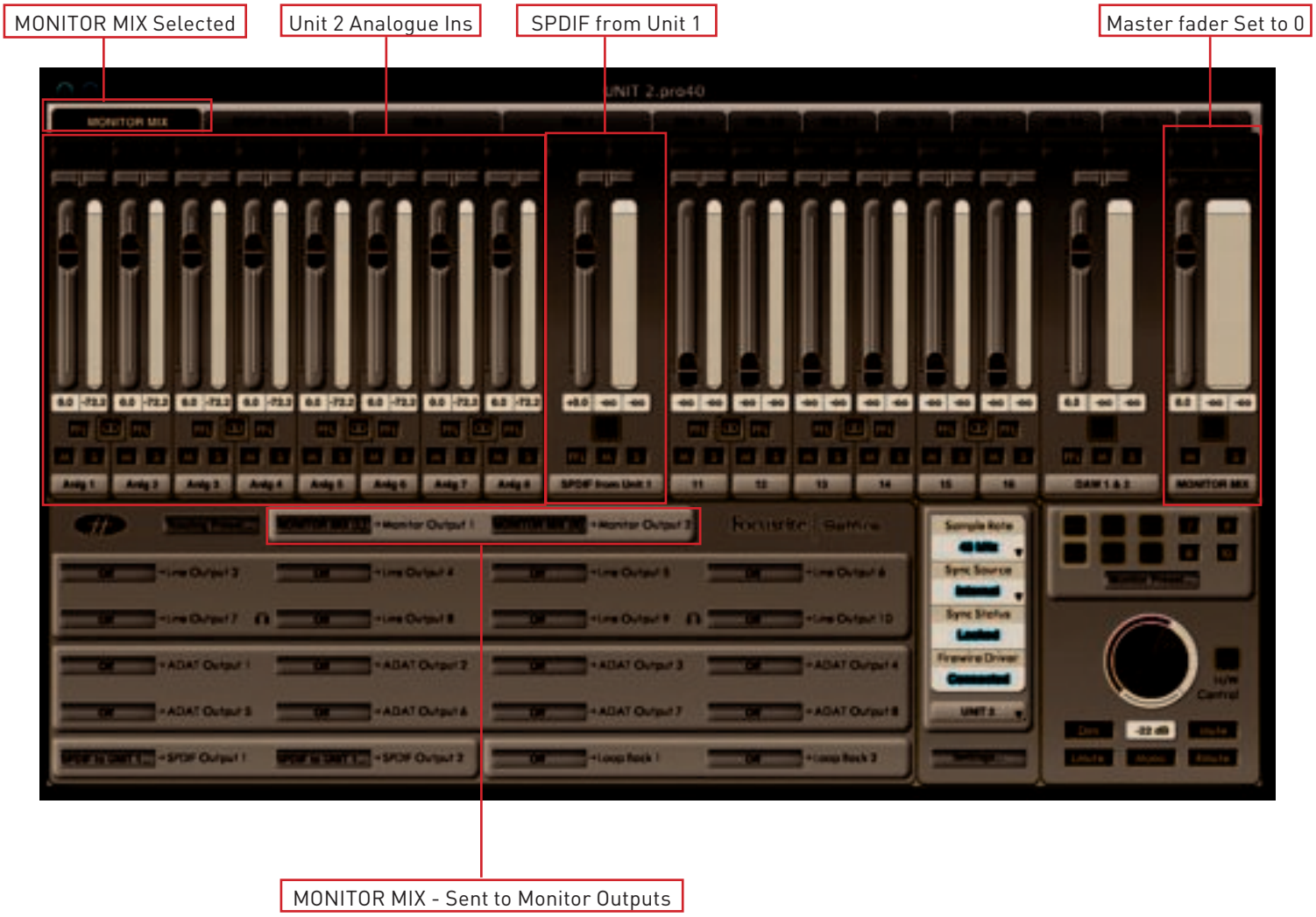
S/PDIF Output Mix (unit 1)

Click on the second mixer tab.
Ensure that the mixer output is stereo by clicking on the stereo button (below the meters of the output channel).
The input configuration will be the same as in the first mixer, set the levels and panning as required.
The S/PDIF input to the mixer should be MUTED (this prevents feedback).
Rename the mix to "S/PDIF Mix" (or similar) by clicking on the name field (below the meters of the output channel).
The S/PDIF output Mix will just be a mix of the audio inputs on unit 1. The S/PDIF input will be muted to avoid feedback, and the mix will be sent out of the S/PDIF output to unit 2. The configuration is as follows:



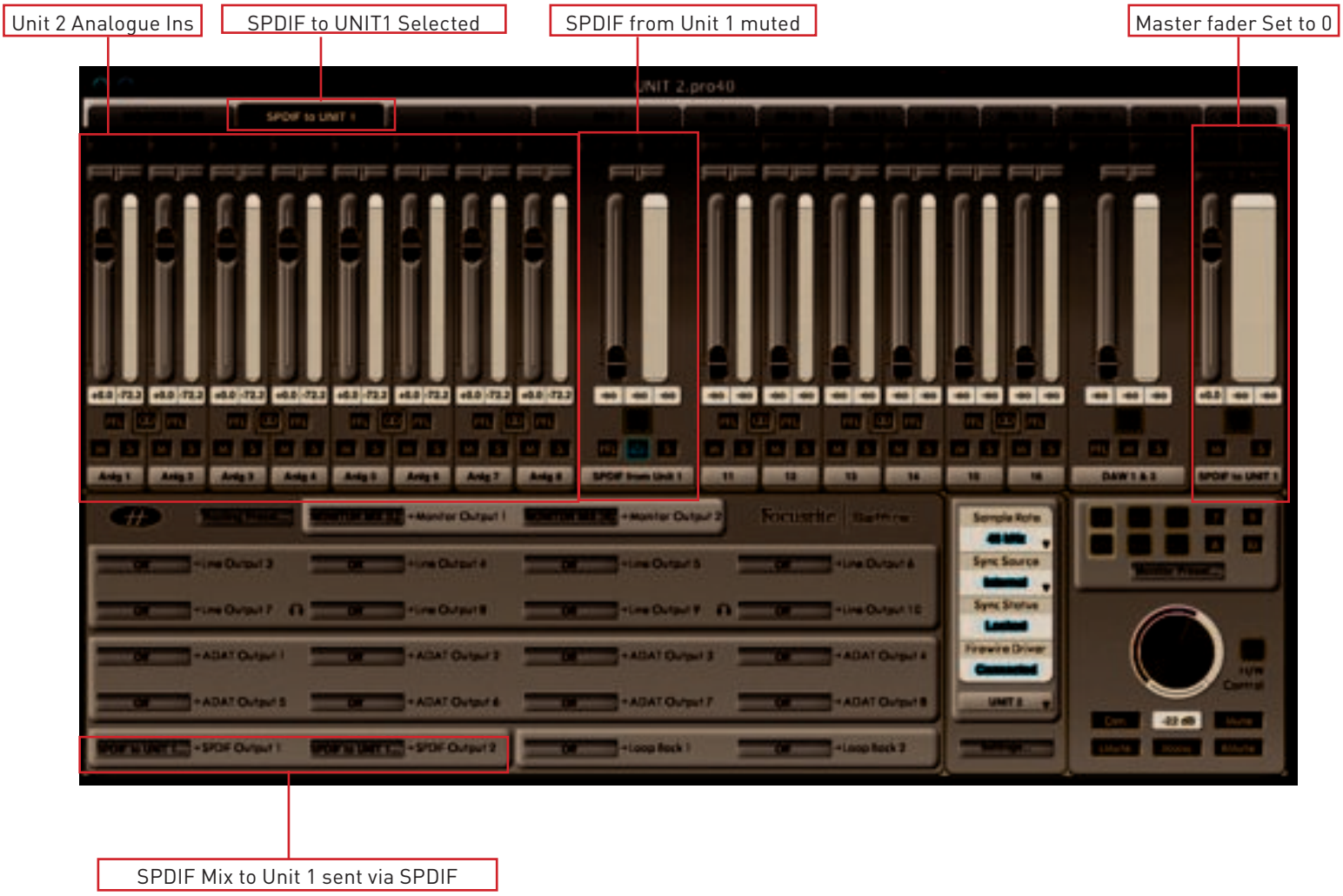
Unit 2 Setup Monitor Output Mix (unit 2)

Switch Saffire Mix Control to the unit 2.
Click on the first mixer tab.
Ensure that the mixer output is stereo by clicking on the stereo button (below the meters of the output channel).
Add the analogue inputs to the mixer, and set the required levels and panning.
Add the S/PDIF input to the mixer (this is the feed from unit 1).
Rename the mix to "MONITOR Mix" (or similar) by clicking on the name field (below the meters of the output channel).
This mix will be a combination of the audio that you are recording (unit 2 inputs), and the S/PDIF output mix from unit 1 (connected to the S/PDIF input of unit 2), as shown below:



S/PDIF Output Mix (unit 2)

Click on the second mixer tab.
Ensure that the mixer output is stereo by clicking on the stereo button (below the meters of the output channel).
The input configuration will be the same as in the first mixer, set the levels and panning as required.
The S/PDIF input to the mixer should be MUTED (this prevents feedback).
Rename the mix to "S/PDIF Mix" (or similar) by clicking on the name field (below the meters of the output channel).
The S/PDIF output Mix will just be a mix of the audio inputs on unit 2. The S/PDIF input will be muted to avoid feedback, and the mix will be sent out of the S/PDIF output to unit 1. The configuration is as follows:



Alternative options

The above set-ups allow mixing and monitoring of only the analogue inputs connected to both Saffire PRO 40s. 8 channels of analogue plus 2 channels of S/PDIF use a total of 10 mixer channels. There are an additional 8 channels that can be used to mix and monitor additional signal sources - whether it be DAW outputs or ADAT inputs. Simply add these to both the MONITOR Mix and S/PDIF Mix.

By selecting ADAT or analogue inputs/outputs rather than S/PDIF inputs/outputs, it is possible to achieve latency-free monitoring via either ADAT or the analogue inputs/outputs if desired.

It is also possible to send individual audio channels between the units, rather than a stereo mix of inputs. This can be done by selecting individual inputs in the routing panel in the bottom left-hand corner of MixControl, rather than the mixes created above.

Dual unit look-up tables

The following tables show how the inputs and outputs of dual Saffires will appear in your DAW's I/O list.
The order in which the units appear in a DAW is as follows: Pro40; LS56; Pro24; Pro24DSP, this is always the case when using different type of unit. The tables below illustrate how the units inputs and outputs on each unit will appear.

Unit:	Unit Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 24	Anlg in 1	1	DAW 1	1
	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	SPDIF 1	5	DAW 5	5
	SPDIF 2	6	DAW 6	6
	ADAT in 1	7	DAW 7	7
	ADAT in 2	8	DAW 8	8
	ADAT in 3	9		
	ADAT in 4	10		
	ADAT in 5	11		
	ADAT in 6	12		
	ADAT in 7	13		
	ADAT in 8	14		
	Loop back 1	15		
	Loop back 2	16		
Saffire PRO 24 DSP	Anlg in 1	17	DAW 1	9
	Anlg in 2	18	DAW 2	10
	Anlg in 3	19	DAW 3	11
	Anlg in 4	20	DAW 4	12
	SPDIF 1	21	DAW 5	13
	SPDIF 2	22	DAW 6	14
	ADAT in 1	23	DAW 7	15
	ADAT in 2	24	DAW 8	16
	ADAT in 3	25		
	ADAT in 4	26		
	ADAT in 5	27		
	ADAT in 6	28		
	ADAT in 7	29		
	ADAT in 8	30		
	Loop back 1	31		
	Loop back 2	32		

Unit:	Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 24	Anlg in 1	1	DAW 1	1
(Lower ID)	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	SPDIF 1	5	DAW 5	5
	SPDIF 2	6	DAW 6	6
	ADAT in 1	7	DAW 7	7
	ADAT in 2	8	DAW 8	8
	ADAT in 3	9		
	ADAT in 4	10		
	ADAT in 5	11		
	ADAT in 6	12		
	ADAT in 7	13		
	ADAT in 8	14		
	Loop back 1	15		
	Loop back 2	16		
Saffire PRO 24	Anlg in 1	17	DAW 1	9
(Higher ID)	Anlg in 2	18	DAW 2	10
	Anlg in 3	19	DAW 3	11
	Anlg in 4	20	DAW 4	12
	SPDIF 1	21	DAW 5	13
	SPDIF 2	22	DAW 6	14
	ADAT in 1	23	DAW 7	15
	ADAT in 2	24	DAW 8	16
	ADAT in 3	25		
	ADAT in 4	26		
	ADAT in 5	27		
	ADAT in 6	28		
	ADAT in 7	29		
	ADAT in 8	30		
	Loop back 1	31		
	Loop back 2	32		

Unit:	Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 24 DSP	Anlg in 1	1	DAW 1	1
(Lower ID)	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	SPDIF 1	5	DAW 5	5
	SPDIF 2	6	DAW 6	6
	ADAT in 1	7	DAW 7	7
	ADAT in 2	8	DAW 8	8
	ADAT in 3	9		
	ADAT in 4	10		
	ADAT in 5	11		
	ADAT in 6	12		
	ADAT in 7	13		
	ADAT in 8	14		
	Loop back 1	15		
	Loop back 2	16		
Saffire PRO 24 DSP	Anlg in 1	17	DAW 1	9
(Higher ID)	Anlg in 2	18	DAW 2	10
	Anlg in 3	19	DAW 3	11
	Anlg in 4	20	DAW 4	12
	SPDIF 1	21	DAW 5	13
	SPDIF 2	22	DAW 6	14
	ADAT in 1	23	DAW 7	15
	ADAT in 2	24	DAW 8	16
	ADAT in 3	25		
	ADAT in 4	26		
	ADAT in 5	27		
	ADAT in 6	28		
	ADAT in 7	29		
	ADAT in 8	30		
	Loop back 1	31		
	Loop back 2	32		

Unit:	Unit Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 40	Anlg in 1	1	DAW 1	1
	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	Anlg in 5	5	DAW 5	5
	Anlg in 6	6	DAW 6	6
	Anlg in 7	7	DAW 7	7
	Anlg in 8	8	DAW 8	8
	SPDIF 1	9	DAW 9	9
	SPDIF 2	10	DAW 10	10
	ADAT in 1	11	DAW 11	11
	ADAT in 2	12	DAW 12	12
	ADAT in 3	13	DAW 13	13
	ADAT in 4	14	DAW 14	14
	ADAT in 5	15	DAW 15	15
	ADAT in 6	16	DAW 16	16
	ADAT in 7	17	DAW 17	17
	ADAT in 8	18	DAW 18	18
	Loop back 1	19	DAW 19	19
	Loop back 2	20	DAW 20	20
Saffire PRO 24	Anlg in 1	17	DAW 1	21
	Anlg in 2	18	DAW 2	22
	Anlg in 3	19	DAW 3	23
	Anlg in 4	20	DAW 4	24
	SPDIF 1	21	DAW 5	25
	SPDIF 2	22	DAW 6	26
	ADAT in 1	23	DAW 7	27
	ADAT in 2	24	DAW 8	28
	ADAT in 3	25		
	ADAT in 4	26		
	ADAT in 5	27		
	ADAT in 6	28		
	ADAT in 7	29		
	ADAT in 8	30		
	Loop back 1	31		
	Loop back 2	32		

Unit:	Unit Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 40	Anlg in 1	1	DAW 1	1
	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	Anlg in 5	5	DAW 5	5
	Anlg in 6	6	DAW 6	6
	Anlg in 7	7	DAW 7	7
	Anlg in 8	8	DAW 8	8
	SPDIF 1	9	DAW 9	9
	SPDIF 2	10	DAW 10	10
	ADAT in 1	11	DAW 11	11
	ADAT in 2	12	DAW 12	12
	ADAT in 3	13	DAW 13	13
	ADAT in 4	14	DAW 14	14
	ADAT in 5	15	DAW 15	15
	ADAT in 6	16	DAW 16	16
	ADAT in 7	17	DAW 17	17
	ADAT in 8	18	DAW 18	18
	Loop back 1	19	DAW 19	19
	Loop back 2	20	DAW 20	20
Saffire PRO 24 DSP	Anlg in 1	17	DAW 1	21
	Anlg in 2	18	DAW 2	22
	Anlg in 3	19	DAW 3	23
	Anlg in 4	20	DAW 4	24
	SPDIF 1	21	DAW 5	25
	SPDIF 2	22	DAW 6	26
	ADAT in 1	23	DAW 7	27
	ADAT in 2	24	DAW 8	28
	ADAT in 3	25		
	ADAT in 4	26		
	ADAT in 5	27		
	ADAT in 6	28		
	ADAT in 7	29		
	ADAT in 8	30		
	Loop back 1	31		
	Loop back 2	32		

Unit:	Unit Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 40	Anlg in 1	1	DAW 1	1
(Lower ID)	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	Anlg in 5	5	DAW 5	5
	Anlg in 6	6	DAW 6	6
	Anlg in 7	7	DAW 7	7
	Anlg in 8	8	DAW 8	8
	SPDIF 1	9	DAW 9	9
	SPDIF 2	10	DAW 10	10
	ADAT in 1	11	DAW 11	11
	ADAT in 2	12	DAW 12	12
	ADAT in 3	13	DAW 13	13
	ADAT in 4	14	DAW 14	14
	ADAT in 5	15	DAW 15	15
	ADAT in 6	16	DAW 16	16
	ADAT in 7	17	DAW 17	17
	ADAT in 8	18	DAW 18	18
	Loop back 1	19	DAW 19	19
	Loop back 2	20	DAW 20	20
Saffire PRO 40	Anlg in 1	21	DAW 1	21
(Higer ID)	Anlg in 2	22	DAW 2	22
	Anlg in 3	23	DAW 3	23
	Anlg in 4	24	DAW 4	24
	Anlg in 5	25	DAW 5	25
	Anlg in 6	26	DAW 6	26
	Anlg in 7	27	DAW 7	27
	Anlg in 8	28	DAW 8	28
	SPDIF 1	29	DAW 9	29
	SPDIF 2	30	DAW 10	30
	ADAT in 1	31	DAW 11	31
	ADAT in 2	32	DAW 12	32
	ADAT in 3	33	DAW 13	33
	ADAT in 4	34	DAW 14	34
	ADAT in 5	35	DAW 15	35
	ADAT in 6	36	DAW 16	36
	ADAT in 7	37	DAW 17	37
	ADAT in 8	38	DAW 18	38
	Loop back 1	39	DAW 19	39
	Loop back 2	40	DAW 20	40

Unit:	Unit Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Liquid Saffire 56	Anlg in 1	1	DAW 1	1
	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	Anlg in 5	5	DAW 5	5
	Anlg in 6	6	DAW 6	6
	Anlg in 7	7	DAW 7	7
	Anlg in 8	8	DAW 8	8
	SPDIF 1	9	DAW 9	9
	SPDIF 2	10	DAW 10	10
	ADAT 1 in 1	11	DAW 11	11
	ADAT 1 in 2	12	DAW 12	12
	ADAT 1 in 3	13	DAW 13	13
	ADAT 1 in 4	14	DAW 14	14
	ADAT 1 in 5	15	DAW 15	15
	ADAT 1 in 6	16	DAW 16	16
	ADAT 1 in 7	17	DAW 17	17
	ADAT 1 in 8	18	DAW 18	18
	ADAT 2 in 1	19	DAW 19	19
	ADAT 2 in 2	20	DAW 20	20
	ADAT 2 in 3	21	DAW 21	21
	ADAT 2 in 4	22	DAW 22	22
	ADAT 2 in 5	23	DAW 23	23
	ADAT 2 in 6	24	DAW 24	24
	ADAT 2 in 7	25	DAW 25	25
	ADAT 2 in 8	26	DAW 26	26
	Loop back 1	27	DAW 27	27
	Loop back 2	28	DAW 28	28
Saffire PRO 24	Anlg in 1	29	DAW 1	29
	Anlg in 2	30	DAW 2	30
	Anlg in 3	31	DAW 3	31
	Anlg in 4	32	DAW 4	32
	SPDIF 1	33	DAW 5	33
	SPDIF 2	34	DAW 6	34
	ADAT in 1	35	DAW 7	35
	ADAT in 2	36	DAW 8	36
	ADAT in 3	37		
	ADAT in 4	38		
	ADAT in 5	39		
	ADAT in 6	40		
	ADAT in 7	41		
	ADAT in 8	42		
	Loop back 1	43		
	Loop back 2	44		

Unit:	Unit Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Liquid Saffire 56	Anlg in 1	1	DAW 1	1
	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	Anlg in 5	5	DAW 5	5
	Anlg in 6	6	DAW 6	6
	Anlg in 7	7	DAW 7	7
	Anlg in 8	8	DAW 8	8
	SPDIF 1	9	DAW 9	9
	SPDIF 2	10	DAW 10	10
	ADAT 1 in 1	11	DAW 11	11
	ADAT 1 in 2	12	DAW 12	12
	ADAT 1 in 3	13	DAW 13	13
	ADAT 1 in 4	14	DAW 14	14
	ADAT 1 in 5	15	DAW 15	15
	ADAT 1 in 6	16	DAW 16	16
	ADAT 1 in 7	17	DAW 17	17
	ADAT 1 in 8	18	DAW 18	18
	ADAT 2 in 1	19	DAW 19	19
	ADAT 2 in 2	20	DAW 20	20
	ADAT 2 in 3	21	DAW 21	21
	ADAT 2 in 4	22	DAW 22	22
	ADAT 2 in 5	23	DAW 23	23
	ADAT 2 in 6	24	DAW 24	24
	ADAT 2 in 7	25	DAW 25	25
	ADAT 2 in 8	26	DAW 26	26
	Loop back 1	27	DAW 27	27
	Loop back 2	28	DAW 28	28
Saffire PRO 24 DSP	Anlg in 1	29	DAW 1	29
	Anlg in 2	30	DAW 2	30
	Anlg in 3	31	DAW 3	31
	Anlg in 4	32	DAW 4	32
	SPDIF 1	33	DAW 5	33
	SPDIF 2	34	DAW 6	34
	ADAT in 1	35	DAW 7	35
	ADAT in 2	36	DAW 8	36
	ADAT in 3	37		
	ADAT in 4	38		
	ADAT in 5	39		
	ADAT in 6	40		
	ADAT in 7	41		
	ADAT in 8	42		
	Loop back 1	43		
	Loop back 2	44		

Unit:	Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 24 DSP	Anlg in 1	1	DAW 1	1
(Lower ID)	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	SPDIF 1	5	DAW 5	5
	SPDIF 2	6	DAW 6	6
	ADAT in 1	7	DAW 7	7
	ADAT in 2	8	DAW 8	8
	ADAT in 3	9		
	ADAT in 4	10		
	ADAT in 5	11		
	ADAT in 6	12		
	ADAT in 7	13		
	ADAT in 8	14		
	Loop back 1	15		
	Loop back 2	16		
Saffire PRO 14	Anlg in 1	17	DAW 1	9
(Higher ID)	Anlg in 2	18	DAW 2	10
	Anlg in 3	19	DAW 3	11
	Anlg in 4	20	DAW 4	12
	SPDIF 1	21	DAW 5	13
	SPDIF 2	22	DAW 6	14
	Loop back 1	23	DAW 7	15
	Loop back 2	24	DAW 8	16
			DAW 9	17
			DAW 10	18
			DAW 11	19
			DAW 12	20

Unit:	Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 40	Anlg in 1	1	DAW 1	1
(Lower ID)	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	Anlg in 5	5	DAW 5	5
	Anlg in 6	6	DAW 6	6
	Anlg in 7	7	DAW 7	7
	Anlg in 8	8	DAW 8	8
	SPDIF 1	9	DAW 9	9
	SPDIF 2	10	DAW 10	10
	ADAT in 1	11	DAW 11	11
	ADAT in 2	12	DAW 12	12
	ADAT in 3	13	DAW 13	13
	ADAT in 4	14	DAW 14	14
	ADAT in 5	15	DAW 15	15
	ADAT in 6	16	DAW 16	16
	ADAT in 7	17	DAW 17	17
	ADAT in 8	18	DAW 18	18
	Loop back 1	19	DAW 19	19
	Loop back 2	20	DAW 20	20
Saffire PRO 14	Anlg in 1	21	DAW 1	21
(Higher ID)	Anlg in 2	22	DAW 2	22
	Anlg in 3	23	DAW 3	23
	Anlg in 4	24	DAW 4	24
	SPDIF 1	25	DAW 5	25
	SPDIF 2	26	DAW 6	26
	Loop back 1	27	DAW 7	27
	Loop back 2	28	DAW 8	28
			DAW 9	29
			DAW 10	30
			DAW 11	31
			DAW 12	32

Unit:	Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 24	Anlg in 1	1	DAW 1	1
(Lower ID)	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	SPDIF 1	5	DAW 5	5
	SPDIF 2	6	DAW 6	6
	ADAT in 1	7	DAW 7	7
	ADAT in 2	8	DAW 8	8
	ADAT in 3	9		
	ADAT in 4	10		
	ADAT in 5	11		
	ADAT in 6	12		
	ADAT in 7	13		
	ADAT in 8	14		
	Loop back 1	15		
	Loop back 2	16		
Saffire PRO 14	Anlg in 1	17	DAW 1	9
(Higher ID)	Anlg in 2	18	DAW 2	10
	Anlg in 3	19	DAW 3	11
	Anlg in 4	20	DAW 4	12
	SPDIF 1	21	DAW 5	13
	SPDIF 2	22	DAW 6	14
	Loop back 1	23	DAW 7	15
	Loop back 2	24	DAW 8	16
			DAW 9	17
			DAW 10	18
			DAW 11	19
			DAW 12	20

Unit:	Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Liquid Saffire 56	Anlg in 1	1	DAW 1	1
(Lower ID)	Anlg in 2	2	DAW 2	2
	Anlg in 3	3	DAW 3	3
	Anlg in 4	4	DAW 4	4
	Anlg in 5	5	DAW 5	5
	Anlg in 6	6	DAW 6	6
	Anlg in 7	7	DAW 7	7
	Anlg in 8	8	DAW 8	8
	SPDIF 1	9	DAW 9	9
	SPDIF 2	10	DAW 10	10
	ADAT 1 in 1	11	DAW 11	11
	ADAT 1 in 2	12	DAW 12	12
	ADAT 1 in 3	13	DAW 13	13
	ADAT 1 in 4	14	DAW 14	14
	ADAT 1 in 5	15	DAW 15	15
	ADAT 1 in 6	16	DAW 16	16
	ADAT 1 in 7	17	DAW 17	17
	ADAT 1 in 8	18	DAW 18	18
	ADAT 2 in 1	19	DAW 19	19
	ADAT 2 in 2	20	DAW 20	20
	ADAT 2 in 3	21	DAW 21	21
	ADAT 2 in 4	22	DAW 22	22
	ADAT 2 in 5	23	DAW 23	23
	ADAT 2 in 6	24	DAW 24	24
	ADAT 2 in 7	25	DAW 25	25
	ADAT 2 in 8	26	DAW 26	26
	Loop back 1	27	DAW 27	27
	Loop back 2	28	DAW 28	28
Saffire PRO 14	Anlg in 1	29	DAW 1	29
(Higher ID)	Anlg in 2	30	DAW 2	30
	Anlg in 3	31	DAW 3	31
	Anlg in 4	32	DAW 4	32
	SPDIF 1	33	DAW 5	33
	SPDIF 2	34	DAW 6	34
	Loop back 1	35	DAW 7	35
	Loop back 2	36	DAW 8	36
			DAW 9	37
			DAW 10	38
			DAW 11	39
			DAW 12	40

Unit:	Input:	DAW Input:	Saffire Mix Output:	DAW Output:
Saffire PRO 14	Anlg in 1	1	DAW 1	9
(Lower ID)	Anlg in 2	2	DAW 2	10
	Anlg in 3	3	DAW 3	11
	Anlg in 4	4	DAW 4	12
	SPDIF 1	5	DAW 5	13
	SPDIF 2	6	DAW 6	14
	Loop back 1	7	DAW 7	15
	Loop back 2	8	DAW 8	16
			DAW 9	17
			DAW 10	18
			DAW 11	19
			DAW 12	20
Saffire PRO 14	Anlg in 1	9	DAW 1	21
(Higher ID)	Anlg in 2	10	DAW 2	22
	Anlg in 3	11	DAW 3	23
	Anlg in 4	12	DAW 4	24
	SPDIF 1	13	DAW 5	25
	SPDIF 2	14	DAW 6	26
	Loop back 1	15	DAW 7	27
	Loop back 2	16	DAW 8	28
			DAW 9	29
			DAW 10	30
			DAW 11	31
			DAW 12	32

Performance Specifications

Microphone inputs 1-2

- Frequency response: 20Hz - 20kHz +/- 0.2 dB
- Gain range: +13dB to +60dB
- Maximum headroom +8dBu
- THD+N: 0.001% (measured at 1kHz with a 20Hz/22kHz bandpass filter)
- Noise EIN: 124dB analogue to digital (measured at 60dB of gain with 150 Ohm termination (20Hz/22kHz bandpass filter)
- Input impedance: 2k Ohm

Line inputs (inputs 1-2)

- Frequency response: 20Hz - 20kHz +/- 0.2dB
- Gain Range: -10dB to +36dB
- THD+N: 0.001% (measured with 0dBFS input and 22Hz/22kHz bandpass filter)
- Noise: -90dBu (22Hz/22kHz bandpass filter)
- Input Impedance: >10k Ohm

Line inputs 3-4

- Frequency response: 20Hz - 20kHz +/- 0.2 dB
- Gain range: switch-able between +16dBu or -10dBV for 0dBFS (balanced inputs)
- THD+N: 0.003% (measured at 1kHz with a 20Hz/22kHz bandpass filter)
- Noise: -100dBu (22Hz/22kHz bandpass filter)
- Input impedance: >10k Ohm

Instrument inputs (Inputs 1 and 2)

- Frequency response: 20Hz - 20kHz +/- 0.1dB
- Gain range: +13dB to +60dB
- THD+N: 0.004% (measured with 0dBu input and 20Hz/22kHz bandpass filter)
- Noise: -87dBu (20Hz/22kHz bandpass filter)

Analogue audio outputs (outputs 1-4)

- 4 electronically balanced outputs
- Maximum output level (0dBFS): +10dBu
- THD+N: 0.001% (0dBFS input, 20Hz/22kHz bandpass filter)

Crosstalk (channel isolation)

- Any input to input: >100dB
- Any output to output: >100dB
- Any input to output: >100dB

DIGITAL PERFORMANCE

- A/D dynamic range >109dB (A-weighted), all analogue inputs
- D/A dynamic range >106dB (A-weighted), all analogue outputs
- Clock sources:
  - internal clock
  - sync to Word Clock on S/PDIF Input (RCA)
- JetPLLTM PLL technology providing superb jitter reduction for class leading converter performance
- Clock jitter <250 picoseconds
- Supported sample rates: 44.1kHz, 48kHz, 88.2kHz, 96kHz
- 8 input channels to computer: analogue (4), S/PDIF (2) and loop back (2)
- 12 output channels from computer: analogue (4), S/PDIF (2), DAW (6)
- Assignable 18 input by 6 output mixer

FRONT AND REAR CONNECTIVITY

Analogue channel inputs (inputs 1-2)

- 2 Mic XLR combo (channels 1-2) on front panel
- 2 Line ¼" TRS (channels 3-4) on rear panel
- Automatic switching between mic / line (channels 1-2)
- Switching between line / instrument Inputs (channels 1-2) via Saffire MixControl application
- Switching between +16dBu (low) and -10dBV (high) gain on inputs 3-4 via Saffire MixControl application

Digital channel inputs (inputs 5-6) 44.1 - 96kHz

- Stereo S/PDIF input on RCA

Analogue audio outputs (outputs 1-4)

- 4 ¼" TRS jacks
- Output level control (analogue) for outputs 1 and 2
- Stereo headphones mix 1 on ¼" TRS (also routed to outputs 3 & 4) with independent volume control

Digital channel outputs (outputs 5-6) 44.1 - 96kHz

- Stereo S/PDIF output on RCA

Other I/O

- 1 6-pin FireWire S400 sockets
- 2 standard 5-pin DIN MIDI connectors: in and out
- DC power input connector (for use with supplied universal input power supply)

Front Panel Indicators

- 2 2 segment input meters, sig (-18) and O/L (0dBFS)
- "LKD" locked indicator
- "FW" host connected indicator
- "Power" indicator
- Instrument input source selection LED for channels 1 and 2
- Phantom power (48V) switch and LED for inputs 1 and 2

Weight and dimensions

- Dimensions: approx. 21.5 x 4.5 x 22cm (W x H x D)
- Weight: 1.5kg

Troubleshooting

For all troubleshooting queries, please visit the Focusrite Answerbase where there are articles covering numerous troubleshooting examples. www.focusrite.com/answerbase.

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